## **National Transportation Safety Board**



Office of Railroad, Pipeline and Hazardous Materials Investigations Human Performance and Survival Factors Division Washington, DC. 20594

# Survival Factors<sup>1</sup> Factual Report – Addendum # 2

Witness Interview - Notes

June 13, 2008

Failure of Dixie Pipeline Company Pressurized Underground Transmission Pipeline, and Subsequent Liquid Propane Release and Fire, near Carmichael, MS, on November 1, 2007

NTSB Accident Number: DCA 08 MP 001

Compiled by:	// s //	Date	June 13, 2008
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Supervisory re	eview: // s //	Doto	June 13, 2008
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<sup>&</sup>lt;sup>1</sup> The scope of the Survival Factors Factual Report [in pipeline accident investigations] exclusively addresses the emergency preparedness and response, and injury causation aspects of the investigation.

## Report Content Synopsis<sup>2</sup>

Utilizing a list of individuals / families that were temporarily displaced during the evacuation process<sup>3</sup>, the Survival Factors [Working] Group conducted a number of individual interviews during the on-scene phase of the Investigation, as well as performed a limited door-to-door canvas of the locale proximate to the accident site (to the extent possible)<sup>4</sup>, in an effort of identifying prospective witness candidates to the pipeline rupture, or the immediate aftermath<sup>5</sup>. As further follow-up, subsequent to the on-scene phase of the investigation, telephone interviews were conducted by the Survival Factors – Group Chairperson with several witnesses or other individuals who had a substantive role in, or could potentially contribute information about, the emergency preparedness / response to the event.

A summarization of significant information obtained in the witness interview process is provided as follows<sup>6, 7</sup>, in which also this report serves as a source document of the witness testimony information cited in the Survival Factors Factual Report, and the corresponding Exhibit 11 (Event Chronology "Timeline" Narrative) of the Factual Report.

## Select acronym nomenclature / abbreviations used in this Report<sup>8</sup>

CDp Clarke County 9-1-1 personnel

CR [Clarke] County Road

CVFD Carmichael Volunteer FD (a.k.a. Carmichael Fire Department)

Dixie Dixie Pipeline Company (pipeline owner / operator)

F female [gender]

FD fire department (generic)

M male [gender] y.o. year old [age]

SF Factual Survival Factors Factual Report

SF Factual § Survival Factors Factual Report section [narrative text]

<sup>&</sup>lt;sup>2</sup> as further described in Survival Factors -Factual Report of the Investigation; see § 7.8.1.

<sup>&</sup>lt;sup>3</sup> list obtained from the local chapter of the Red Cross (an agency which helped in the administration of the evacuation shelter utilized in the event)

<sup>&</sup>lt;sup>4</sup> in consideration of the time available (during the on-scene phase of the investigation), an effort was made to contact all witnesses on the prospective witness list and canvas as many of the residences as possible that were immediately proximate to the accident site (allowing for those prospective witnesses who were unable to be located [i.e. not at the residence at the time of attempted interview] or who declined to be interviewed), in which the composite results of said inquiry effort is comprised within this report.

<sup>&</sup>lt;sup>5</sup> an effort was made to contact surviving witnesses to the event, or immediate aftermath, who resided in the damaged / destroyed residences in the 4100 and 4200 block of County Road 621, in which also the witnesses were not forthcoming to that contact outreach (as further described in this report).

<sup>&</sup>lt;sup>6</sup> the interviews are cited in no particular priority or sequence order, where also the Interview sequence numbers cited are for reference convenience only.

<sup>&</sup>lt;sup>7</sup> all narrative account [statements] in quotations are direct quotes of the Witness.

<sup>&</sup>lt;sup>8</sup> supplements the list of <u>Select Acronym Nomenclature</u>, provided in the Survival Factors - Factual Report of the Investigation.

#### Interview # 1

Witness Identification: restricted<sup>9</sup>

Role of Witness in the accident: was an apparent direct witness to the encroaching [propane]

gas cloud and subsequent explosive ignition of the gas, who

was located at the time of the event, at a residential

dwelling in the 4300 block of CR 621.

Context reference<sup>10</sup>: SF Factual § 7.2.2.a, and § 8.6, and SF Factual - Exhibit 11

Contact source: identity relayed to NTSB via local emergency responders

Interviewed by: Survival Factors – Group Chairperson

Date Interviewed: Dec. 6, 2007 (via telephone)

Interview record format: hand-written notations by NTSB staff

Interview content summary:

This witness<sup>11</sup> (a 42 y.o. M) indicated that, on the morning of the accident, he was visiting his great aunt at her residence in the 4300 block of CR 621.

At about 10:35 am, the witness heard, and took notice of, the resounding sound of a loud boom, which appeared to have occurred a short distance away. Immediately subsequent to this, this individual heard, and became concerned about, a loud, unusual, resounding sound outside of the residence, which the witness described as somewhat of a pulsating, "rumbling, roar", which he initially thought was originating from some type of airplane (flying above the property). This individual walked outside, to the porch of the residence, for a brief period of time to investigate the source of the noise, but found nothing, whereupon he returned inside the residence.

At about 10:38, as the sound continued, after a short period of time, the witness again went outside the residence to try to determine the noise source. This individual walked a short distance in front of the dwelling, toward the pavement of CR 621. Upon reaching the roadside mailboxes (in front of the residence), he looked in a northerly direction of the CR 621 roadway, where he observed the residential dwelling located at 4195 CR 621, which was the residence of a relative of his (i.e. a cousin) <sup>12</sup>. The dwelling at 4195 CR 621 was located opposite a 'bend' in the roadway at that location, which was [later determined to be] about 600 feet north of his location. He also observed what the witness described as a "white cloud coming up the road", which was in the area of the dwelling at 4195 CR 621, in which also the white cloud appeared to be moving in a right to left [i.e. east to west] direction. This individual was puzzled at what he was seeing, and had no idea what had initiated the white cloud, or its source, or if this was potentially a

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<sup>&</sup>lt;sup>9</sup> for considerations of personal privacy, personal identities of <u>all witnesses</u> have been omitted from this report, the information of which remains confidential to the investigation (i.e. accessible only to authorized NTSB staff, or other authorized entities).

<sup>&</sup>lt;sup>10</sup> i.e. the location in the SF Factual Report, or other noted documentation, where this witness is initially referenced <sup>11</sup> this individual resides in a municipality located about a 45 minute drive to the northeast of this location, and (as noted) happened to be visiting his relative, at this location, that morning.

<sup>&</sup>lt;sup>12</sup> remains of one individual (of the two fatalities that occurred in this event) were later found at the described residential dwelling.

situation of eminent peril<sup>13</sup>, but was alarmed, and concerned, to the extent that this needed to be examined further.

This individual stated that he also saw at that time, a heavy-set female, which he believes was another relative of his (i.e. the daughter of the resident of 4195 CR 621), who resided at 4207 CR 621<sup>14</sup>, which is the residential dwelling located immediately next door to (i.e. to the east of) the residence at 4195 CR 621. He stated that he saw this individual running from a right to left direction (in his field of view), which was in an east to west direction, where the individual was running toward the dwelling at 4195 CR 621, and he stated that this individual was "yelling for sis". The individual wasn't sure what was occurring in his observation, and didn't communicate with the F individual running in the distance, but was becoming increasingly alarmed at what was occurring.

This individual went back inside the residence, and telephoned Clarke County 9-1-1 at 10:40:13 to report what was occurring (as further described; see separate the Addendum Report "Clarke County – E911 / Central Dispatch – Activities Timeline, which provides a transcript of that dialog).

During that 911 call (which had a duration of 1:33), this individual walked back outside the residence (with the cordless phone handset) and walked toward the CR 621 pavement in front of the house, to observe [in a northerly direction] that the residential dwelling at 4195 CR 621 (to the north) had now essentially disappeared into the white cloud, which also had completely obscured that segment of the CR 621 roadway. Upon concluding the 911 call (at 10:41:46), in seeing the white cloud approaching the residence through the woods (behind [east of] the dwelling), the witness decided it was time for them to withdraw [self-evacuate] as soon as possible from that location, and seek a safer venue until it could be determined exactly what was occurring.

At about 10:42, he convinced his great aunt that they needed to immediately depart the residence, and make an expeditious egress (in his vehicle), to evade the approaching "white cloud". This individual assisted his great aunt in getting to his pickup truck<sup>15</sup>, which was parked just off the CR 621 pavement in front of the house; a process (upon concluding the 911 call) that is estimated have taken about one minute to complete<sup>16</sup>. The individual's great aunt got into the passenger seat, and he quickly walked around to the driver's side, and got into the vehicle.

<sup>15</sup> the individual expressed that, although not physically impaired, his great aunt, in being a 'senior citizen', does

<sup>&</sup>lt;sup>13</sup> i.e. that the white cloud was extremely explosive propane gas

<sup>&</sup>lt;sup>14</sup> remains of the other individual (of the two fatalities that occurred in this event) were later found near the described residential dwelling.

require a slight amount of extra time to complete mobility tasks, as compared to a younger individual.

16 as consideration, this witness indicated that he estimated the time interval (to reposition himself, with his great aunt, from the residence to his vehicle) to have been about two minutes; however, in consideration of the action of another [credible] eye-witness to the explosive ignition of the propane gas (who initiated a 9-1-1 call to the Wayne County 9-1-1 agency, which appears to have an accurate 'timestamp' of 10:42:50), who more accurately identifies the time of the explosive ignition, it's surmised that this witness may have inadvertently over-estimated the two-minute time interval, where his action was actually less than one minute.

At what is estimated to be  $10:42:30^{17}$ , upon closing the driver's door, but before this individual turned the ignition key, suddenly, and without warning, an enormous explosion occurred, which violently shook the pickup truck. The witness stated that when this occurred, he also saw a "ball of fire coming through the trees" from the east (behind his great aunt's house).

The witness then felt substantial heat inside the pickup truck, and in looking to his right, saw that the passenger-side door was not quite fully closed. Fire had enveloped the wooded areas to the north and east of their location, but had not encroached upon the relatively open ground where his pickup truck was parked (adjacent to the CR 621 pavement). Fire had also enveloped the pavement areas of CR 621 to the north, which, (because he was located near the end of CR 621) blocked the only roadway escape path in that direction. Accordingly, with a heavy wooded area to the west (which the witness recognized would be difficult to travel quickly through with his great aunt), the only expedient escape path for them was obviously to the south (which, absent pavement, or at least a cleared 'drivable' trail, they would need to proceed on foot).

The witness said to his great aunt "we need to get out of the truck", whereupon the two quickly exited the vehicle. There was an extreme level of heat in the area, where the two individuals began to quickly proceed, on foot, in a southerly direction, away from the fire, in which he also assisted his great aunt so that they could evade the increasing heat as quickly as possible. During this escape from that area, the witness stumbled and fell to the ground, and sustained a minor abrasion to his arm. When the witness looked back in the direction of the cluster of residential dwellings proximate to his great aunt's house, he saw flames "swirling" a distance above the dwellings, but that the dwellings were not actually on fire.

The two individuals were able to proceed, on foot, at a relatively fast pace (almost fully running at first, where they then slowed down due to his great aunt's inability to sustain a fast pace), a distance of several hundred yards, to a clearing at the edge of a small pond located to the south of the cluster of residences proximate to his great aunt's house, where they found that they were sufficiently distanced from the fire and the ensuing heat. During that trek, they were joined by another cousin (a male, age about 12, who exited from one of the other residential dwellings in that area) as they quickly moved toward the pond. The three of them remained at that location for a period of time to allow the fire to subside, and contemplated entering the pond if the fire approached their location, which it didn't.

They waited at that location an estimated 30 to 45 minutes, during which time the fire subsided (essentially self-extinguished). At that time, the witness walked back (solo) toward the residence (to the north), to determine the extent of damage and if it was safe to exit the area. He observed burnt grass and trees, but the fire in the surrounding area was subsiding. The residential dwellings had not ignited and exhibited some minor heat damage (melted plastic trim, etc.). He returned to his pickup truck, which exhibited some minor heat damage (melted plastic elements), but was operable. He drove the short distance south toward the pond, where he was able to maneuver his vehicle through a drivable pathway, to a location close to the pond.

<sup>&</sup>lt;sup>17</sup> the identified time designation (estimation) is based upon the action of another [credible] eye-witness to the explosive ignition of the propane gas (who initiated a 9-1-1 call to the Wayne County 9-1-1 agency, which appears to have an accurate 'timestamp' of 10:42:50) where that witness indicated that the explosive ignition of the gas occurred about 20 seconds preceding his call to 9-1-1.

The two others boarded his pickup truck at that location, and he drove north, toward the residential dwellings, where they encountered two men, one of which appeared to be a Deputy Sheriff. The men asked them what had occurred, which they provided a brief description of what they had experienced, and the men asked if there were others in their group, which they responded no. The men told them to immediately evacuate the area by following the roadway toward CR 620), which they indicated they would, where the witness continued driving (toward the residences. They stopped at the great aunt's residence, where she entered the dwelling momentarily to obtain her purse, whereupon the three subsequently continued onward in the vehicle and exited the area.

The witness drove north on CR 621 (for the short distance of pavement to the 'bend' in the roadway), where the group observed that the trees and vegetation had burned, but the prevailing fire in that area had somewhat self-extinguished, except for tree stumps, dried grass, etc. which continued to burn.

At the 'bend' in the roadway, the group observed the smoldering / burned-out remnants of the residential dwelling that stood at 4195 CR 621, and also saw the several other nearby residential dwellings which had also been reduced to smoldering piles of rubble. The witness stated he did not stop the vehicle, nor did the three observe the remains of the two individuals who did not survive the fire.

Further along the roadway (after the 'bend' in the roadway, which it extends in a westerly direction, as they approached where the pipeline crosses beneath the CR 621 roadway), the witness saw the father of one of the individuals who was later found deceased near one of the fire-destroyed residential dwellings, but they didn't stop the vehicle or engage in dialog. A short distance further they encountered a female relative of one of the individuals who was later found deceased near one of the fire-destroyed residential dwellings. The witness stopped the vehicle briefly to engage in dialog with that individual, where that individual indicated that she attempted to help the decedent, but that she "couldn't get her out". A short distance further they encountered another female relative of one of the individuals who was later found deceased near one of the fire-destroyed residential dwellings. The witness stopped the vehicle briefly to engage in conversation with that individual, where that individual indicated only that [the decedent] "didn't make it out".

A short distance further they encountered a firefighter from the CVFD, and several other individuals, which he assumed were law enforcement personnel. The three were asked similar questions that the prior law enforcement officer had asked (if there were others in their group, etc.), and then were told to continue onward toward CR 620, where they could obtain medical assistance.

The witness continued along the roadway to the arrived at the intersection of CR 621 and CR 620. The witness saw a Deputy Sheriff from Enterprise that he recognized, who asked similar questions that the prior law enforcement officers had asked. The three then proceeded to an ambulance that was parked near the intersection, to receive some initial medical attention. The paramedics attended to the great aunt, and the younger relative (who was with them) indicated

that he wasn't injured. The paramedics preliminarily attended to the arm injury of the witness, although the witness indicated to them that he would later seek more comprehensive medical attention through his our resources (i.e. his own physician).

After a period of time, the witness drove the three to the residence of a nearby relative (on CR 636), and then (because that location was within the one-mile evacuation zone) drove onward to his brother's residence. He dropped his great aunt off at that location, where the individuals at that location indicated that they would transport his great aunt to a local hospital (possibly in Wayne County) for further medical attention. The witness then later drove himself to a medical facility in Meridian, MS, where he would seek further medical attention for his minor arm injury.

In concluding the interview, the witness indicated that he was doing relatively OK in his recovery, and that the three family members of the two decedents (he encountered on the CR 621 roadway) who he remains in close contact with, were still grieving and recuperating from their loss, and they weren't ready to make contact with others in this matter (i.e. potentially participate in an NTSB interview, to document what they had witnessed in the event). As the witness concurred that it was important that the facts of the event, relative to the two decedents, be made available (to the extent possible, and with all respect accommodated accordingly to the privacy of the decedents and surviving family members), and that such information sharing would be beneficial to perhaps help others overcome similar challenges. Accordingly, the witness agreed to be an informal 'family contact' for the three family members of the two decedents, where he acknowledged that the three family members were already aware that the NTSB desired to interview them, but that they weren't quite ready, but that they might "come around". This writer responded that it would be greatly appreciated if the family members could muster the strength to share what they had experienced, on the prospect of potentially helping others to overcome similar challenges. And further, that any interviews would be conducted entirely at their convenience and that the NTSB would respect the privacy of the family, and not pursue any interviews until the family members agreed to same, which the witness appreciated. The witness said he would affirm the interview inquiry to the three family members, accordingly, at an appropriate time, in order to make a determination as to if/when they might consent to an interview, at which time the witness indicated that he would personally contact this writer.

To date, no further contact has been received by this writer from the witness, or from the three surviving family members, or any other representatives of the three surviving family members.

-- End of Interview --

Interview # 2

Witness Identification: restricted

Role of Witness in the accident: was an apparent auditory witness to the release of

[propane] gas, and subsequent explosive ignition of the gas,

who was located at the time of the event, in her residential

dwelling, in the 8500 block of CR 630.

Context reference: SF Factual § 7.2.1, and SF Factual - Exhibit 11

Contact source: List of individuals / families that were temporarily

displaced during the evacuation process<sup>18</sup>

Interviewed by: participants of the Survival Factors Group (who were

present for the interview)

Date Interviewed: November 4, 2007 (in-person)

Interview record format: hand-written notations by NTSB staff

Interview content summary:

This witness (a F, senior-citizen) indicated that she was in her residential dwelling at the time of the event.

At about 10:35, the witness is alarmed by a loud, unusual noise outside of the residence. The witness described the sound as somewhat of a pulsating "roar", which she initially thought was originating from a helicopter (hovering above the property). This witness spent several minutes walking about the residence, in an attempt to identify the source of the sound. Within a few minutes of this sound initiating, a neighbor (of the witness) arrived at the residence and indicated that the sound was from the pipeline, where the neighbor also thought that the pipeline was about to "explode", and implored the witness to immediately call the pipeline company to report what was occurring.

At about 10:41, the witness, in response to the neighbor's suggestion that the pipeline company be notified, located a 'pipeline awareness' brochure (distributed by Dixie / Enterprise Products), and placed a phone call to the [800 / toll-free] Dixie / Enterprise Products emergency number cited therein. The witness advised the individual answering the call [a Houston Pipeline Operations Controller] of a loud, unusual noise originating from the direction of the pipeline, which she described as being 'behind her property', and provided the location address. The witness indicated that during the phone conversation, the noise of what appeared to be a loud explosion is heard by the witness <sup>19</sup>, which appeared (to the witness) to have originated from the direction of the pipeline right-of-way. This loud noise is later identified [by the investigation] to likely have been an ignition of the propane gas that had been released from the pipeline rupture.

The witness indicated that she experienced (during the event) what appeared to be a minor abrasion to her arm that occurred when she was walking about the residence (where she had bumped her arm against a piece of furniture) in an attempt to identify the source of the sound, for which she did not seek medical attention.

The Houston Controller (the witness spoke with) subsequently indicated that this particular phone call was helpful in specifically locating the site of the pipeline rupture.

At 10:52:57, this witness placed a telephone call to Clarke County 9-1-1, to report the "pipeline behind the house has just blown-up". CDp responded that the FD was already en route.

<sup>&</sup>lt;sup>18</sup> list obtained from the local chapter of the Red Cross (an agency which helped in the administration of the evacuation shelter utilized in the event)

<sup>&</sup>lt;sup>19</sup> no determination could be made by the Investigation as to when (i.e. at what time during the phone discussion) this noise occurred, as the witness was not recording the time when various elements of the event occurred.

Subsequent visual examination [by NTSB investigative staff] indicated this individual's residence appeared to have sustained minor structural damage, where also it was later identified that the residence was located about 2,500 feet northeast of the pipeline rupture location.

The witness was asked if she had received any 'public awareness' literature from the pipeline owner / operator [Dixie Pipeline Company] and/or the management service provider [Enterprise Products Operating, LLC], or if representatives of either organization had visited the residence to provide information about the pipeline, to which she responded that she did receive a brochure that she used in the event (as describe in this interview), but that she didn't recall any representatives of either organization who had visited the residence.

-- End of Interview --

#### Interview #3

Witness Identification: restricted

Role of Witness in the accident: was an apparent witness (from a distance) to the release of

[propane] gas, and subsequent explosive ignition of the gas.

Context reference: none<sup>20</sup>

Contact source: referral by local emergency responders

Interviewed by: participants of the Survival Factors Group (who were

present for the interview)

Date Interviewed: November 4, 2007 (in-person)

Interview record format: hand-written notations by NTSB staff

Interview content summary:

This witness (a middle-aged M) indicated that he was performing routine work (with a helper) in an open field on his property (relatively near his residence) at the time of the event. The witness noted that (immediately preceding the event) the wind was out of the east.

At about 10:35 am, the witness heard, and took notice of, the sound of a loud, resounding boom, which appeared to have occurred to the north of his location, about a half-mile away. Immediately subsequent to this, the witness heard, and subsequently saw, a large white cloud extend into the air, a distance of several hundred feet above the tree line in the direction of the loud boom. Immediately subsequent to this, the witness heard a "pulsating roar", and the ground was shaking with a tremble, which the witness indicated was much like a passing train. Thereafter, in continuing to look in that direction, no white cloud was seen, although the rumbling roar continued. The witness attempted several times to place a [cellular] telephone call to 9-1-1, but his phone indicated "no service" at each attempt. The witness, although very

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<sup>&</sup>lt;sup>20</sup> no direct reference of this witness is cited in the SF Factual Report documentation, although [for witnesses in the "none" context category] the information provided in this report is ancillary to, and directly supportive of, the overall Survival Factors Investigation process, and is cited in this report in the interest of investigative thoroughness and accuracy (as the information may also be contributory to the investigation Analysis process).

concerned at what was occurring, continued performing his work routine, pausing every several minutes to view / listen to what was occurring, and attempt a 9-1-1 call.

About 5 to 10 minutes after the loud boom, a "massive explosion" occurred at the location of the white cloud, which resulted in a "solid fire ball" that extended into the air above the tree line that (in his estimation) measured "about ¼ mile wide by ¼ mile high", which the witness could feel (a few moments later) a "heat wave" in his face. The witness indicated that the explosion was actually three separate explosions, occurring in rapid sequence. After the initial blast, the flame withdrew to about 100 yards in diameter, which he could still see above the tree line.

Upon seeing / hearing this, the two individuals immediately ran in a southerly direction for a distance (away from the direction of the fire). Shortly thereafter, he drove his vehicle to his residence, retrieved his dog, and then drove down his driveway (to the road upon which his residence is located) and continued to drive in a southerly direction a short distance, where he stopped at the edge of the roadway (at what he deemed was a sufficiently safe distance from the fire) to observe the continuing fire above the tree line. He was joined at that location a short time later by several other residents of that area, who also stopped to watch the fire. He noted that the wind had changed, to where it was now [while stopped roadside] to the north. After a period of time, he returned to his residence, and then (somewhat anticipating that an evacuation of that area would be initiated) he drove out of the area for several hours.

The witness was not injured in the event, and upon conducting a cursory examination, he found some pictures had displaced slightly on the walls, but did not observe significant damage to his property, although he intended to conduct a more detailed inspection at a later time. The witness was asked if he had received any 'public awareness' literature from the pipeline owner / operator [Dixie Pipeline Company] and/or the management service provider [Enterprise Products Operating, LLC], or if representatives of either organization had visited the residence to provide information about the pipeline, to which he responded that he didn't recall receiving any such materials or any representatives of either organization who had visited the residence.

-- End of Interview --

Interview #4

Witness Identification: restricted

Role of Witness in the accident: was an apparent auditory witness to the release of

[propane] gas, and subsequent explosive ignition of the gas.

Context reference: SF Factual § 7.8.2

Contact source: referral by local emergency responders

Interviewed by: participants of the Survival Factors Group (who were

present for the interview)

Date Interviewed: November 4, 2007 (in-person)

Interview record format: hand-written notations by NTSB staff

Interview content summary:

The witnesses (a middle-aged M) indicated that he was on a ladder, working on the exterior of his barn, on his property at the time of the event<sup>21</sup>.

At about 10:35 am, the witness heard, and took notice of, the sound of a loud boom, that occurred in the distance. Given his employment history 22, he stated that he somewhat recognized the sound as the noise which is characteristic of a pipe breach under pressure. The witness said that about one minute after hearing the noise<sup>23</sup>, the witness then heard "an explosion", which he indicated startled him to the point of causing him to almost loose his balance (on the ladder) and caused him to descend the ladder very quickly, to the point of almost resulting in him falling from the ladder. He immediately suspected that one of the pipelines in that area had ruptured and had subsequently ignited on fire. He ran to his residence a short distance away, alerted his wife (who was at the residence) as to what he suspected was occurring, and called 9-1-1 (where the CDp indicated that the FD was already dispatched to the scene). The two individuals then mounted his all terrain vehicle (also referred to as an ATV), and drove north on CR 620 a short distance toward the sound, where they encountered Witness # 3 (of this report) stopped at the roadside, with several other individuals, watching the unfolding event above the tree line to the north. The witness and his wife remained at that location for about one hour, in which also the wife of the witness recorded the event with a compact video camera that she brought along (the recording of which the witness subsequently made available to the Investigation). The witness noted that the fire (above the tree line) was initially observed as relatively "low", then it became "high", then "low" again, and so forth, in which it continued to vary in size for the duration of their view.

The witness was not injured in the event, and upon conducting a cursory examination, he did not observe significant damage to his property, although he intended to conduct a more detailed inspection at a later time. The witness was asked if he had received any 'public awareness' literature from the pipeline owner / operator [Dixie Pipeline Company] and/or the management service provider [Enterprise Products Operating, LLC], or if representatives of either organization had visited the residence to provide information about the pipeline, to which he responded that he didn't recall receiving any such materials or any representatives of either organization who had visited the residence.

-- End of Interview --

Interview # 5

Witness Identification: restricted

Role of Witness in the accident: Assistant Chief of the CVFD, who was an apparent witness

to the explosive ignition of the [propane] gas (from a distance), who also responded [emergency services

resources of the CVFD] to the scene

<sup>21</sup> the property location was subsequently identified to be about 2 miles south of the accident site

<sup>22</sup> the witness indicated he is retired after spending about 29 years in the oil refinery business

<sup>&</sup>lt;sup>23</sup> to clarify, the time interval between the rupture and the explosive ignition of the gas was subsequently identified to be somewhat longer that this witness recalled at that time (as further described in Survival Factors -Factual Report of the Investigation; see § 7.2).

Context reference: SF Factual § 6.2, § 7.2.2.b, § 7.3.2.a, § 7.3.5, § 7.6.1 and

other incidental locations, and SF Factual - Exhibit 11

Contact source: routine investigation contact with local emergency response

agencies

Interviewed by: participants of the Survival Factors Group (who were

present for the interview), and individually by the Survival

Factors - Group Chairperson

Date Interviewed: November 2, 2007 (in-person), and several subsequent

discussions

Interview record format: hand-written notations by NTSB staff

Interview content summary: As described in SF Factual Report, and Exhibit 11

Interview # 6

Witness Identification: restricted

Role of Witness in the accident: Director of Clarke County Communications [agency]

Context reference: SF Factual § 6.8, § 7.3.1, and other incidental locations,

and SF Factual - Exhibit 11

Contact source: routine investigation contact with local emergency response

agencies

Interviewed by: participants of the Survival Factors Group (who were

present for the interview), and individually by the Survival

Factors - Group Chairperson

Date Interviewed: November 3, 2007 (in-person), and several subsequent

discussions

Interview record format: hand-written notations by NTSB staff

Interview content summary: As described in SF Factual Report, and Exhibit 11

Interview # 7

Witness Identification: restricted

Role of Witness in the accident: apparent auditory witness to the release of [propane] gas,

and subsequent explosive ignition of the gas, who was located at the time of the event, in her residential dwelling

in the 3400 block of CR 621.

Context reference: none<sup>24</sup>

Contact source: door-to-door canvas

Interviewed by: participants of the Survival Factors Group (who were

present for the interview)

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<sup>&</sup>lt;sup>24</sup> see footnote 20

November 6, 2007 (in-person) Date Interviewed:

Interview record format: hand-written notations by NTSB staff

Interview content summary:

This witness (a F, age mid-30's, with preschool age children) indicated that, on the morning of the accident, she was sleeping [in her bedroom] at the time of the event, when she heard a loud rumbling sound, which she thought were military airplanes (jets) flying over the house at low altitude. A short time later, she then heard a loud boom, and then another loud boom. She went outside her home and saw heavy black smoke to the east. She immediately telephoned her neighbor to inquire what was occurring. She then telephoned 9-1-1 to report what was occurring. The witness then received a phone call from the sister of the witness (who resides a short distance west on that same road), whereupon shortly thereafter, the sister of the witness (see Interview # 8) then arrived (by automobile), and then (in an effort of immediately escaping the unfolding event) they all drove [in the sister's automobile] to Quitman, and then subsequently drove to another relative's home (to await conclusion of the evacuation of the area proximate to her home, which went into effect subsequent to her departure from the residence).

The witness, nor her children, were injured in the event, and upon conducting a cursory examination, found some pictures and other personal effects had displaced slightly in the home, but did not observe significant damage to his property, although she intended to conduct a more detailed inspection at a later time. The witness was asked if she had received any 'public awareness' literature from the pipeline owner / operator [Dixie Pipeline Company] and/or the management service provider [Enterprise Products Operating, LLC], or if representatives of either organization had visited the residence to provide information about the pipeline, to which she responded that she didn't recall receiving any such materials or any representatives of either organization who had visited the residence.

-- End of Interview --

Interview # 8

Witness Identification: restricted

Role of Witness in the accident: apparent [auditory] witness to the explosive ignition of

[propane] gas, who was located at the time of the event, in

her residential dwelling in the 3700 block of CR 621.

none<sup>25</sup> Context reference:

Contact source: door-to-door canvas

participants of the Survival Factors Group (who were Interviewed by:

present for the interview)

Date Interviewed: November 6, 2007 (in-person)

Interview record format: hand-written notations by NTSB staff

Interview content summary:

<sup>25</sup> see footnote 20

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This witness (a F, age mid-30's, with preschool age children) indicated that, on the morning of the accident, she was in her living room, with her children, when she felt a sudden, unexplained, "high-pressure" [mostly in her ears] and that it felt like the residence [a mobile home], whereupon she looked out the window to see a large fire (flames and smoke) over the tops of the trees to the east. She didn't understand what was occurring, whereupon, thinking the fire was coming her way, she placed her children on the bed (so to keep them together in one place), where they remained (for a time interval that she said was about eight minutes), during which time she telephoned her sister (who resides a short distance east on that same road; see Interview #8) to inquire what was occurring, where her sister described what was occurring at that location. She indicated to her sister that they needed to evacuate the area, and that she thought that her residence might catch on fire (if the fire approached that location). She then phoned her aunt, and described what was occurring, at which point the witness became very distraught and concerned over what was occurring. She then stayed in her residence for a few minutes (attempting to decide the next course of action), and then started walking on the road (in front of the residence) toward her sister's residence. A short time later, she encountered her sister on the road, whereupon the two briefly discussed the situation and decided to evacuate the area, with their children. The witness returned [the short distance] to her residence, got into her automobile, and drove the short distance to her sister's residence, then collected her sister and her children, and then (in an effort of immediately escaping the unfolding event) they all drove [in the sister's automobile] to Quitman, and then subsequently drove to another relative's home (to await conclusion of the evacuation of the area proximate to her home, which went into effect subsequent to her departure from the residence).

The witness, nor her children, were injured in the event, and upon conducting a cursory examination, found some personal effects had displaced slightly in the home, but did not observe significant damage to his property, although she intended to conduct a more detailed inspection at a later time. The witness was asked if she had received any 'public awareness' literature from the pipeline owner / operator [Dixie Pipeline Company] and/or the management service provider [Enterprise Products Operating, LLC], or if representatives of either organization had visited the residence to provide information about the pipeline, to which she responded that she didn't recall receiving any such materials or any representatives of either organization who had visited the residence.

-- End of Interview --

Interview # 9

Witness Identification: restricted

Role of Witness in the accident: apparent witness to the release of [propane] gas, and

subsequent explosive ignition of the gas, who was located at the time of the event, in a building at her place of employment (a commercially operated poultry hatchery / egg production facility<sup>26</sup>), at the intersection of CR 620 and

CR 621.

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<sup>&</sup>lt;sup>26</sup> a poultry raising operation, principally comprised of large, barn-like structures, known locally as "chicken houses"

Context reference: none<sup>27</sup>

Contact source: door-to-door canvas

Interviewed by: participants of the Survival Factors Group (who were

present for the interview)

Date Interviewed: November 6, 2007 (in-person)

Interview record format: hand-written notations by NTSB staff

Interview content summary:

This witness (a senior citizen, F) indicated that, on the morning of the accident, she was performing her work routine proximate to a work station (at the east end of the [metal] building), along with another employee (who wasn't available for an interview, where also the two employees were the only individuals at the facility), when she heard what sounded like thunder, which was followed 3 or 4 seconds later by a much louder [thunder-like] boom, and immediately saw [adjacent to her location] the east wall of the building flex inward. She then looked out the window to see a large cloud of black smoke to the east and saw flames above the tree line. She immediately yelled for the other employee (who was a short distance away, but apparently didn't see or hear what was occurring), indicating they needed to get out of the building, where the two employees immediately ran out of the building (on the north end, proximate to a parking lot), and continued running a short distance from the building. About a minute later, the two individuals returned to the building's parking lot, where the witness then got into her automobile, and drove to her residence, where she remained for the balance of the day (to await conclusion of the evacuation of the area proximate to her place of employment, which went into effect subsequent to her departure from her place of employment).

Later that evening (while at her residence) the witness felt "stressed", and as a precautionary measure, went to the local hospital [facility not identified] where she was treated and released, and then returned to her residence. The witness indicated that she has recovered from the stress that she experienced, and has been able to resume her employment duties without difficulties.

The witness was asked if (during here employment tenure at that location) she had received any 'public awareness' literature from the pipeline owner / operator [Dixie Pipeline Company] and/or the management service provider [Enterprise Products Operating, LLC], or if representatives of either organization had visited the place of her employment to provide information about the pipeline, to which she responded that she didn't recall receiving any such materials or any representatives of either organization who had visited the place of her employment. The witness did indicate that she had received 'public awareness' literature from another pipeline company (she recalled "Transco" was the pipeline company name, but wasn't certain) at her residence address (which is located proximate to a different pipeline right-of-way than was involved in this event).

-- End of Interview --

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<sup>&</sup>lt;sup>27</sup> see footnote 20

### Interview # 10

Witness Identification: restricted

Role of Witness in the accident: apparent [auditory] witness to the explosive ignition of

[propane] gas, who was located at the time of the event, in

his residential dwelling in the 6500 block of CR 630.

Context reference: none<sup>28</sup>

Contact source: door-to-door canvas

Interviewed by: participants of the Survival Factors Group (who were

present for the interview)

Date Interviewed: November 6, 2007 (in-person)

Interview record format: hand-written notations by NTSB staff

Interview content summary:

This witness (an adult M) indicated that, on the morning of the accident, he and his wife were home at the time, when they felt the house shake, where they felt and heard 3 or 4 "blasts". He turned on his scanners<sup>29</sup> to learn what was happening. They evacuated [via their automobile] to the Carmichael Community Center, and were later told to further evacuate toward Quitman, but they subsequently returned to the Community Center a short time later. They were domiciled in a local motel that evening, and returned home the following day.

Neither the witness, nor his wife, were injured in the event, and upon conducting a cursory examination, did not observe significant damage to his property.

The witness was asked if they had received any 'public awareness' literature from the pipeline owner / operator [Dixie Pipeline Company] and/or the management service provider [Enterprise Products Operating, LLC], or if representatives of either organization had visited the residence to provide information about the pipeline, to which he responded that he didn't recall receiving any such materials or any representatives of either organization who had visited the residence. The witness noted that the pipeline right-of-way is directly across the road from his property.

-- End of Interview --

#### Interview # 11

Witness Identification: restricted

Role of Witness in the accident: possible witness to the event, who resides in the 4300 block

of CR 621.

Context reference: none<sup>30</sup>

Contact source: door-to-door canvas

<sup>29</sup> a monitoring device used to listen to FD and/or Sheriff Department service radio transmissions

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<sup>&</sup>lt;sup>28</sup> see footnote 20

<sup>30</sup> see footnote 20

Interviewed by: participants of the Survival Factors Group (who were

present for the interview)

Date Interviewed: November 6, 2007 (in-person)

Interview record format: hand-written notations by NTSB staff

Interview content summary:

This witness (an adult M) indicated that, on the morning of the accident, he was not at home or in the area (and thus wasn't able to offer any direct information). He offered suggestions as to which of the local residents (cited in the potential Witness List) might have been home at the time of the event.

-- End of Interview --

Interview # 12

Witness(es) Identification: restricted [two individuals]

Role of Witness in the accident: management principals of Hunt Crude Oil Supply

Company

Context reference: SF Factual § 2.1.2, § 7.3.2.b, and SF Factual - Exhibit 11

Contact source: referral by local emergency responders

Interviewed by: participants of the Survival Factors Group (who were

present for the interview)

Date Interviewed: November 8, 2007 (in-person)

Interview record format: hand-written notations by NTSB staff

Interview content summary: As described in SF Factual Report, and Exhibit 11

Interview # 13

Witness Identification: restricted

Role of Witness in the accident: Administrator of H.C. Watkins Memorial Hospital

Context reference: SF Factual § 8.4, § 8.6, and other incidental locations, and

SF Factual - Exhibit 11

Contact source: routine investigation contact with local medical facilities

Interviewed by: Survival Factors – Group Chairperson

Date Interviewed: during on-scene phase of the Investigation [brief initial /

introductory contact only], and February 13, 2008 (via

telephone)

Interview record format: hand-written notations by NTSB staff

Interview content summary: As described in SF Factual Report, and Exhibit 11

Interview # 14

Witness Identification: restricted

Role of Witness in the accident: Administrator of Wayne General Hospital

Context reference: SF Factual § 8.4, § 8.6, and other incidental locations, and

SF Factual - Exhibit 11

Contact source: routine investigation contact with local medical facilities

Interviewed by: Survival Factors – Group Chairperson

Date Interviewed: January 15, 2008 (via telephone)

Interview record format: hand-written notations by NTSB staff

Interview content summary: As described in SF Factual Report, and Exhibit 11

Interview # 15

Witness Identification: restricted [two individuals]

Role of Witness(es) in the accident: Administrator, and Risk Manager of Jeff Anderson

Regional Medical Center

Context reference: SF Factual § 8.4, § 8.6, and other incidental locations, and

SF Factual - Exhibit 11

Contact source: routine investigation contact with local medical facilities

Interviewed by: Survival Factors – Group Chairperson

Date Interviewed: February 28, 2008 (via telephone / email)

Interview record format: hand-written notations by NTSB staff

Interview content summary: As described in SF Factual Report, and Exhibit 11

Interview # 16

Witness Identification: restricted [three individuals]

Role of Witness(es) in the accident: [technical service] maintenance contractor of the E911 /

Central Dispatch - Service Radio communications

equipment

Context reference: SF Factual § 7.3.1, § 7.3.5, § 7.9, § 10.4.1, and other

incidental locations, and SF Factual - Exhibit 11

Contact source: routine investigation contact [follow-up] by Survival

Factors – Group Chairperson

Interviewed by: Survival Factors – Group Chairperson

Date Interviewed: April 15 & 16, 2008 (via telephone / email)

Interview record format: hand-written notations by NTSB staff, as supported by

documented statements of Technical Service Technician

Interview content summary: As described in SF Factual Report, and Exhibit 11

Interview # 17

Witness Identification: restricted [two individuals]

Role of Witness in the accident: Principals of Mississippi State Forestry Commission, which

provided fire suppression to grasslands / wooded areas

Context reference: SF Factual § 6.6.2, § 7.3.2.c, and other incidental locations,

and SF Factual - Exhibit 11

Contact source: routine investigation contact [follow-up] by Survival

Factors – Group Chairperson

Interviewed by: Survival Factors – Group Chairperson

Date Interviewed: January 9 & 14, 2008 (via telephone / email)

Interview record format: hand-written notations by NTSB staff, as supported by

[routine report] documentation of the agency

Interview content summary: As described in SF Factual Report, and Exhibit 11

Interview # 18

Witness Identification: restricted [four individuals]

Role of Witness(es) in the accident: Principals of The Pipeline Group<sup>®</sup>, a technical [support]

contractor which conducts the Government Liaison -Emergency Response Program emergency responder familiarization activities, on behalf of the pipeline owner / operator and the management service provider in this

investigation

Context reference: SF Factual § 6.2.3, § 6.8.9.b, § 6.9.1.g, § 6.9.1.h, § 6.9.4.b,

§ 6.9.5.a, § 6.9.5.b, and other incidental locations, and in

another SF Factual Report - Addendum

Contact source: routine investigation contact [follow-up] by Survival

Factors – Group Chairperson

Interviewed by: Survival Factors – Group Chairperson

Date Interviewed: commencing March 10, 2008, and concluding April 25,

2008 (via telephone, with email inquiry / response dialog)

Interview record format: hand-written notations by NTSB staff, as supported by

[corroborative] documentation of the organization's

activities

Interview content summary: As described in SF Factual Report, and in another SF

Factual Report - Addendum

Interview # 19

Witness Identification: restricted

Role of Witness in the accident: Clarke County - Fire Marshal / Fire Investigator (who is

also Chief of the Quitman Volunteer Fire Department), who provided investigative technical support to the Forensic Examination of the four residential structures

Context reference: SF Factual § 5.2.1, and SF Factual - Exhibit 7

Contact source: routine investigation contact with local emergency response

agencies

Interviewed by: participants of the Survival Factors Group (who were

present for the Forensic Examination), and subsequent

interview contacts by Survival Factors - Group

Chairperson

Date Interviewed: commencing November 3, 2007 [in conducting the

described Forensic Examination], and throughout the onscene phase of the Investigation, and several subsequent

interview contacts (via telephone)

Interview record format: hand-written notations by NTSB staff

Interview content summary: As described in SF Factual Report, and Exhibit 7

Interview # 20

Witness Identification: restricted

Role of Witness in the accident: a Member of Clarke County – Board of Supervisors

Context reference: SF Factual § 6.3, § 6.8, § 7.3.5, § 10.2, § 10.3, and other

incidental locations, and SF Factual Report - Addendum 1

Contact source: routine investigation contact with relevant local

government agencies

Interviewed by: Survival Factors – Group Chairperson

Date Interviewed: commencing November 5, 2007, and throughout the on-

scene phase of the Investigation, and several subsequent

interview contacts (via telephone / email)

Interview record format: hand-written notations by NTSB staff

Interview content summary: As described in SF Factual Report, and Addendum 1

Interview # 21

Witness Identification: restricted

Role of Witness in the accident: Operations Supervisor at Wayne County 9-1-1 / Central

Dispatch, who provided response information on Wayne

County [mutual aid] emergency services resources

Context reference: SF Factual § 7.2.2.c, § 7.3.3, and other incidental locations,

and SF Factual - Exhibit 11

Contact source: routine investigation contact with relevant local emergency

services agencies

Interviewed by: Survival Factors – Group Chairperson

Date Interviewed: May 8 and 12, 2008

Interview record format: hand-written notations by NTSB staff

Interview content summary: As described in SF Factual Report, and Exhibit 11

Interview # 22

Witness Identification: restricted

Role of Witness in the accident: was an apparent witness (from a distance) to the explosive

ignition of the [propane] gas, who then telephoned Wayne

County 9-1-1.

Context reference: SF Factual § 7.2.2.c, § 7.3.3, and other incidental locations,

and SF Factual - Exhibit 11

Contact source: routine investigation contact [follow-up] with a relevant

witness by Survival Factors – Group Chairperson

Interviewed by: Survival Factors – Group Chairperson

Date Interviewed: May 15, 2008

Interview record format: hand-written notations by NTSB staff

Interview content summary: As described in SF Factual Report, and Exhibit 11

-- End of Report --